Medical Lib. DEC 6 1926

The
Public Health Journal

OFFICIAL ORGAN
Canadian Public Health Association

Vol. XVII TORONTO, NOVEMBER, 1926 No 11

SPECIAL ARTICLES

THE MENTAL FACTOR IN DISEASE AND ITS TREATMENT BY THE GENERAL PRACTITIONER

CHAS. HUNTER, M.A., M.D.

PUBLIC HEALTH NURSING EDUCATION AND THE UNDERGRADUATE NURSE

E. KATHLEEN RUSSELL, R.N.

A SURVEY OF THE RESULTS OF ROUTINE AND OTHER WASSERMANN TESTS IN THE TORONTO GENERAL HOSPITAL FOR THE PAST TEN YEARS

H. K. DETWEILER, M.D.

OBJECTIVES AND STANDARDS OF VENTILATION

C. E. A. WINSLOW

$2.00 per annum 40 ELM STREET, TORONTO 2 20 cents per copy

PUBLIC HEALTH BIOLOGICAL PRODUCTS *and* INSULIN

Diphtheria Antitoxin
Diphtheria Toxin for Schick Test
Diphtheria Toxoid *(Anatoxine Ramon)*
Scarlet Fever Antitoxin
Scarlet Fever Toxin for Dick Test
Scarlet Fever Toxin
Tetanus Antitoxin

Anti-Meningitis Serum
Anti-Pneumococcic Serum *(Type I)*
Anti-Anthrax Serum
Normal Horse Serum

Smallpox Vaccine
Typhoid Vaccine
Typhoid-Paratyphoid Vaccine
Pertussis Vaccine
Rabies Vaccine *(Pasteur Treatment)*

Insulin

Price List Upon Request

CONNAUGHT LABORATORIES
University of Toronto
TORONTO 5 CANADA

The Public Health Journal

Vol. XVII. TORONTO, NOVEMBER, 1926 No. 11

The Mental Factor in Disease and Its Treatment by the General Practitioner*

By Chas. Hunter, M.A., M.D., (Aberd.), M.R.C.P., (Lond.)

Winnipeg, Man.

I HAVE chosen this topic for consideration because I think the importance of the mental factor in disease is insufficiently appreciated by the general practitioner, and because I have been specially interested in the subject for many years.

The last forty years have revolutionized medicine—the rapid advances in physiology, the rise of pathology, bacteriology and bio-chemistry, the ever widening knowledge of the ductless glands, the contributions of surgery and of the x-rays, have made the present generation of medical men frankly materialistic and unwilling to accept any explanation of disease which cannot be controlled in the post mortem room, or in the laboratory with culture tube, microscope or biochemical method. In the wards, our clinical material for teaching has been drawn almost exclusively from acute disease, or chronic disease with readily demonstrable organic findings, and the out-patient department of our hospitals, with its wealth of cases illustrating early structural change and functional disorder, has been, till recently at least, utilized but sparingly in teaching medical students.

In the enthusiasm aroused by our rapidly widening knowledge of the physical factors in disease, comparatively little attention has been devoted to the mental factors associated, while the semi-contemptuous discussion of hysteria by the average teacher served only to create in the student mind the impression that here one had to deal with exceptional suggestibility and exceptional weakness of will. Hence the rank and file of the profession in the past have started off with absolute ignorance of the mental factor in health and disease—nay more, with a strong prejudice against neurotics—a prejudice which naturally prevented them from later entering into sympathetic relationship with, or understanding of, these sufferers.

* Delivered before the Toronto Academy of Medicine, April 6, 1926.

It is true that medical science has been reaching out towards this problem from another angle. Amplifying the idea of structural change as the sole basis of disease, comes the finer conception of disorder of function, with changes as yet not detectable in the post mortem room. Along with the functional conception of disease, the physiologist and clinician alike now recognize more fully the interaction and mutual dependence of the bodily organs. In such a reckoning, the nervous system, as exhibited in the functional activity of the mind, cannot be left out of the reckoning. Thought, feeling and action, the highest functions of man, influence, and are in turn influenced by, all the other organs of the body. Sherrington and Head have laid the foundations of our knowledge of reflex action, simple and compound, in the lower animals and in man, while Pavlov has added the "conditioned reflex." The autonomic nervous system and endocrine glands have been linked up with the emotions through the work of Langley, Gaskell, Cannon and other investigators.

The old psychology of the individual, apart from his social setting (a psychology which afforded no material for the understanding of human behaviour) has been supplemented by a social psychology, and by the study of behaviour in the lower animals; the behaviourist school has arisen, boldly asserting that the conduct of any man is but the sum of his conditioned reflexes. But this conclusion is strongly combated by other psychologists like McDougall, who asserts that human nature and human action are not capable at present of being adequately explained or described in terms of nervous structure and function, but must be dealt with in terms of mind.

The speculative genius of Freud has stimulated psychological research enormously; with the rise of psychopathology, neuroses, insanity and crime came to be looked on as a failure of individuals to adjust themselves adequately to the demands of social life. The objective psychopathologists, like Hamilton, are now busy translating Freudian concepts into terms of behaviourism. Ultimately, no doubt, a unified knowledge will be possible; in the meantime, I think the physician may approach the neuroses from the mental angle, supplementing and modifying his viewpoint by all relevant physiological advance.

Turning now to the diagnosis and treatment of the mental factor in disease. The older one gets, I think, the more impressed one becomes of the value of a very careful and full history of all diseases, organic or functional. My own practice is to get the patient's story of his present illness, followed by the history of previous illnesses and the family history; usually one thus hears mainly of the physical factors, and I do not seek specially to elicit possible mental factors until a thorough phy-

sical examination of the patient stripped has been made. Special laboratory and other tests may be indicated by the history or physical examination. The preliminary physical history and examination form a much needed check on a possible tendency to see disease from the psychic angle alone, and give the patient time to acquire the necessary confidence in the physician, without which, enquiry into the patient's mental life will necessarily be fruitless.

The diagnosis is the best trump in treatment and only by accurate diagnosis can the conscientious physician be distinguished from the charlatan. At the outset, we are concerned in excluding organic disease —a difficult task in so many cases. In the humility born of so many errors in the past, we should try to detect the early symptoms of organic disease, but must guard against originating by careless word or look, doubts and fears in hitherto healthy subjects. For we have all seen physically healthy people, whose symptoms appeared only after a medical examination.

I venture to repeat what I said on this subject four years ago: "If in doubt, after careful examination, the physician should usually give the patient the benefit of the doubt. More real suffering is induced by a mistaken diagnosis of organic disease than by occasionally overlooking it. Discomforts all too readily become disabilities under the fostering influence of suggestion. If it is considered a reproach for a surgeon to have a clean wound go septic, it is high time to protest against the physician instilling doubt and fear into a healthy man." We medical men are, I think, habitual pessimists in the face of some unusual symptom or physical sign, as James MacKenzie so emphatically pointed out in heart cases.

We may divide our patients into four groups:—First: those who are suffering from acute disease or from advanced organic disease of such a character that all their symptoms are readily explicable from the physical standpoint. This group, in my judgment, not a large one, does not concern us here.

In the second group, we include quite healthy individuals who are in doubt about this or that unimportant symptom—a passing ache on the right side of the belly, a soreness over the heart, a momentary dizziness. Here a specially careful examination should be made of the part of the body implicated, after the usual history and general physical examination; it is also wise tactfully to find out what the patient is afraid of, and why. We can then give much more specific reassurance, and are more likely to remove the disturbing symptom or at least make the possessor barely conscious of it, if his viewpoint has been discounted only after consideration.

In passing, it must be emphasized that such trifling symptoms may be the earliest sign of serious organic disease. Thus, for some months I unfortunately regarded as neurotic a Jewess, whose main complaint was a localized pain to one side of the dorsal spine; a sudden paresis of the lower limbs corrected the diagnosis to spinal cord tumour, which was later verified by operation.

In the third group, there is organic disease of which the patient may be aware—albuminuria, valvular disease of the heart, disseminated sclerosis, thyroid enlargement, or what not. Now, as Parry long ago pointed out, if organic disease is found, the patient himself counts; it is much more important often to know what sort of patient has a disease that what sort of disease the patient has. It is too readily assumed that all the symptoms complained of by the subject of organic disease are due to that disease. Yet very frequently the main disability is induced by doubt and fear, excited through knowledge of the disease present, and provoking emotional reactions in the shape of various bodily symptoms. Thus a number of patients with organic disease of various kinds, left me for Christian Science, finding in that strange doctrine, freedom from symptoms and peace of mind not attained under my treatment. And no inconsiderable proportion of "cures" at the hands of osteopaths and other irregulars depends on the same neglected factor.

This combination of functional and organic disease may be illustrated from my experience: For eight years, I have had under my care an unmarried lady of thirty-five, with an enlarged and rapid heart, associated with aortic insufficiency and mitral stenosis. Septic tonsils, the only source of focal infection discoverable, were removed; the basal metabolic rate was normal; the patient's general condition was good, though she complained of weakness, and breathlessness on exertion, and preferred to use three pillows at night. For four years, I restricted her activities very greatly; her people were in easy circumstances and she fell into the role of a semi-invalid readily. I found, however, that on two occasions when illness in her family threw greater responsibility on her, the heart improved rather than tired. Now for three years, I have encouraged her to do a good deal more with no ill effect to the heart, and with a marked improvement in her morale. A year ago, Dr. Richard Cabot of Boston confirmed my view of her case.

Similarly, I saw overseas three soldiers with congenital cardiac lesions, who had carried on perfectly well at the front till sent down the line for flat feet or similar non-infective disability. The heart lesion was discovered and evidently misinterpreted in hospital, where all three developed marked neurotic cardiac symptoms, and these constituted the

main disability. This interpretation was confirmed in one case by Sir William Osler, and in another by Colonel Finley of Montreal.

With angina pectoris there is frequently an associated nervous element, which is very liable to be overlooked. When the cases of coronary occlusion which are rapidly fatal, or at best leave behind very marked cardiac weakness, are excluded, we have a fair number of patients with angina who survive for many months and often for some years, continuing comfortably at sedentary work, while living within their cardiac income. Particularly if we find a patient developing anginal symptoms on slight provocation one day, and yet able to tolerate considerable strain the next, we should look for some associated factor, which may be of course a passing infection, or indiscretion in diet, etc., but which is frequently neurotic in origin. There is naturally a close association in the lay mind between heart disease and sudden death, yet such association is justified, we physicians know, only in a limited number of cardiac cases, among which angina pectoris bulks largely. It is so often not the disease, but the patient's absurd notions about that disease, which determine the symptoms complained of.

The discovery of high blood pressure frequently excites neurotic manifestations, and many unhappy individuals have their interest centred round the fluctuations of their blood pressure. The exploitation of this by quacks should make us the more careful to secure the necessary hygienic and dietetic precautions without necessarily alarming the patient.

"Hardening of the arteries" is a term of very evil omen to the lay mind and is used much too loosely by physicians. Albuminuria in young people, unaccompanied by any other evidence of organic disease and often obviously orthostatic in origin, is too frequently treated with unnecessary restriction of diet and activity; when a boy or girl cannot take part freely in games and sports, a grave feeling of inferiority is often engendered, which may leave permanent trace in the character.

It is well known that many cases of chronic renal disease of even moderately advanced type, as shown by inconsiderable rise in blood pressure and enlargement of the heart, with the associated urinary changes, can carry on for many years with little apparent disability. No doubt their lives should be regulated, their diet supervised sufficiently, but unnecessary restrictions and alarm should be avoided, and this is often forgotten. The suspicion must arise that many of the symptoms complained of by other patients in apparently similar circumstances must frequently be accidental or purely neurotic in character. I do not wish to be misunderstood; so many complicating factors are here concerned, apart from the functional efficiency of the kidneys—we have the state of the arteries, notably in the brain, the condition of the heart, the state of the body

generally, the type of work demanded and above all the type of patient concerned. I merely plead for the recollection of possible emotional reactions which may be responsible for some of the symptoms complained of.

The crest of the surgical wave at present is bearing, I think, on the thyroid, and is bound to recede somewhat; we have, I think, unnecessary alarm in girls under twenty-five with simple goitre, and even in hyperthyroid cases the influence of chronic emotional states in perpetuating symptoms must be reckoned with.

Disseminated sclerosis sometimes develops rapidly with resulting paresis of the lower extremities; such weakness often clears up entirely, though a tell-tale extensor response and absent abdominal reflex still mark the latent disease. As Hurst has emphasized, such cases, correctly diagnosed, may lie around for months after full power has returned to the limbs, simply because they were not specially encouraged to get round. It is fatal for a pessimistic physician to label a patient with an incurable disease.

Nowhere do we find organic disease and neurotic symptoms more intimately associated than in many enteroptotic individuals, and this complexity has been, I think, largely responsible for the failure of measures taken either purely from the mechanical, or purely from the mental side. While removal of the appendix for the common right-sided ache, freeing of adhesions and stitching up of organs have been conspicuous in their failure to relieve symptoms, simple psycho-therapeutic treatment is very frequently just as impotent.

In passing, I may touch on the difficulty the physician is placed in when he recognizes very early a case of slowly progressive and incurable disease. Thus, I saw eighteen months ago, a man of forty-two years, in whom the only complaint was that in walking he did not swing one arm; he added that the condition did not bother him, and that if reassured, he would dismiss from his thoughts the trifling disability. The case was obviously one of commencing paralysis agitans. Now recently, in a Lettsomian lecture, Farquhar Buzzard has claimed that in just such a case the physician should from the outset tell the patient frankly what is before him. I have doubts whether such frankness is in the best interests of many patients we see, as for months or even years after, the disability may be so slight that in the absence of such grave warning, comparatively little interference with enjoyment of life may be experienced.

We pass now to the fourth and last group—the psycho-neurotics. It is often obvious early in the interview that all the symptoms are those of functional nervous disease; just in these cases, there is need

for a most careful physical examination preceded by a careful history from the physical angle. So often one finds some defect, some slight deviation from health, which forms the organic starting point for the neurotic symptoms. In one case, it may be slight deafness; in another, flat feet curtailing early physical activities; in yet another, a poorly developed penis, arousing quite unnecessarily a feeling of inferiority. The physician can here help greatly by correcting, if not the physical defect, at least the exaggerated emotional reaction aroused.

The history may, too, reveal that the neurotic symptoms appeared only after the subject was run down by overwork, debilitating illness, such as influenza, or by excesses. In the prairie provinces many farmers' wives with several children and without assistance at home, present a real problem, in which overwork and actual exhaustion play a great role in the development of neurotic symptoms. Usually to these physical factors, others of mental origin are associated—financial worry, domestic indifference or actual unhappiness, monotony of life, etc. There is a third reason why a thorough physical examination and evaluation of the ordinary history should be made; for only then can the physician with assurance proceed to consider the case from the psychic angle.

Now when the ordinary physical examination reveals nothing which will adequately account for the symptoms complained of, "the man above the eyebrows" must be considered. The general practitioner has the great advantage of seeing these patients early and in their homes; the hereditary influences, the domestic life, the special difficulties in the case, (factors only imperfectly elicited by the consulting physician) lie open before the family doctor, if he but care to study the human comedy or tragedy enacted in the home with a sympathetic eye.

The hereditary factors are particularly important; one must not expect AI children from CIII parents. For we start in life with a varying handicap; some the fortunate of well-balanced parents and with a happy childhood; others of a weaker strain, mentally and physically, with the primitive instincts and their attending emotions initially harder to control—a deficiency accentuated by the example and foolish training given by the unstable parents. The influence of parental unhappiness, separation or divorce, of quarrelling in the family, of foolish grandparents, or doting friends, throws a shadow far into the child's adult life. It is surprising how frequently such factors can be elicited in the history of psycho-neurotics; an important consideration, as much has been put to the score of heredity which is really due to early influence and training in the home.

We must remember the neurotic is in trouble; he cannot adapt himself successfully to the claims and duties laid upon him in his social

environment. By tact, patience, and sympathetic understanding, the patient is induced to talk freely of his present discomforts and disabilities, and to tell how they arose; his personal difficulties and problems are then taken up and this paves the way to an understanding of his family, his social and business relationships, and his reactions to the situation disclosed. The hereditary and the childhood influences, the past difficulties encountered, must often be investigated, while in men and married women, the sexual life may be enquired into freely. A boy will usually tell of any sexual difficulty present if a little tact and reassurance be displayed, but I have generally avoided direct questioning of girls and unmarried women, unless it was obvious that questions of sex were involved. In all this work, the personality of the physician counts for much, but even those of us who are not richly endowed may, if interested, establish in some degree the favourable atmosphere necessary for such a delicate discussion.

Hamilton remarks—and the point is a good one—that he holds the patient to an orderly account of himself by constantly reminding him that the most important question is: "to what things are you now responding inadequately and how are you responding to them?" Thus cornered, very many patients will supply with little difficulty information of personal problems, to which they are obviously reacting inadequately, and will sometimes add that they themselves had suspected that in the unsatisfactory solution of these problems lay the cause of their nervous symptoms. Yet these patients, though dimly aware where the difficulty lay, gave often a history of prolonged local treatment, of dietary restrictions, and of drug taking prescribed by physicians of too materialistic training.

In many cases, as Ross remarks, it will be found that the patient knows that he has certain personal anxieties; he knows also, but as a separate and unconnected fact, that he is ill with certain symptoms—such as headache, depression on waking in the morning, palpitation or indigestion. He will often insist that there must be some physical cause to account for his bodily symptoms, and will resent the implication that the latter are secondary to his inadequate adjustment to life. Yet the domestic unhappiness, the loss of fortune, the thwarted ambition, the unexpressed but ever present fear, the secret sin—factors such as these, inadequately faced with resolute acceptance of all the implications, are by the subtle chemistry of our emotions transferred into physical disabilities.

For under emergencies which, in the animal would produce fight or flight, and which in man are attended with pain and great emotional excitement, the sympathetic division of the automatic nervous system

is stimulated, influencing in turn the suprarenal medulla, the liver and the thyroid; apparently too, the cranial and the pelvic autonomic divisions are influenced. The sympathetic division acts as a whole, influencing all the viscera through its increased or decreased tone; the cranial autonomic which includes the vagus nerve, acts on the viscera with discriminating and particular action; the sympathetic, as Cannon says, is like the soft and loud pedals, modulating all the notes together; the cranial autonomic is like the separate keys.

Hamilton points out that in man, baffling situations in which the patient reacts over long periods irrationally, with anger, sorrow, anxiety or with a sense of grievance—correspond to emergencies, and influence the vegetative functions similarly; yet this very emergency reaction, life saving in nimals and in physical crises in man, may be a positive detriment where the baffling situation must be met by rationally determined adjustive measures, as it introduces a distracting awareness of the bodily mechanisms. An example may be given:

An auto mechanic of thirty-two, married, with two children; always well till a year ago; served with distinction overseas and without breakdown for four years in a fighting unit; complained of nervousness, weakness, palpitation, lack of appetite and vague pains. Physical examination was quite negative. Just prior to the onset of symptoms, the foreman in the large works died, and after a month's delay and hope, another man was appointed foreman, purely on grounds of seniority, though my patient was told he was the better man for the job. He had known the new foreman overseas and despised his record in the army. The foreman took advantage of his position to criticize and make trouble. My patient had a chronic sense of grievance; brooded over the situation "like a rat in a trap" as he put it. The pay was good; as a married man with children, he was afraid if he gave up his job as he wished, he might not get another position. He reacted to the difficulty as to an emergency, with resulting disturbance of his vegetative functions as seen in palpitation, lack of appetite, etc.

Many such patients are met with; the conscientious married woman with a dissolute husband, the unmarried daughter with an urge for self-expression outside the home, yet compelled by a sense of duty to assist the mother; the business man whose affairs are critical, etc.

Now it is obvious that the cure for such patients lies in their dispassionate survey of the situation; in their resolute and rational acceptance of the inevitable with a corresponding adjustment of their behaviour. This too may be tentatively translated into physiological terms, as Hamilton suggests: "We have reason to believe that this (rational) type of adjustive function involves the distribution of neural energy in complex patterns which are largely composed of cortical intercalary neurons, and which do not importantly include the autonomic neurons.

In other words, purely rational reactions to experience do not involve emergency interferences with vegetative functions."

The practical difficulty is that it is impossible in many instances to get the patient to adopt a rational stand to his difficulties; intellectually, he acknowledges the necessity but the lower type of irrational non-adjustive behaviour is too engrained in his nature to be overcome. For, to put it in McDougall's words, "The instincts are the prime movers of all human activity and all the complex intellectual apparatus of the most highly developed mind is but the instrument by which these impulses seek their satisfaction; they are the mental forces that maintain and shape all the life of individuals and of societies." Yet some of these patients can be induced resolutely to face the music and to make the best of a bad job. I turn now to a thorny problem, which I may introduce by an example:

An unmarried woman of thirty, a stenographer, consulted me some years ago, because men looked at her in a "meaning way" on the street, and sometimes even in the office—she felt that, by look and gesture, they made improper advances to her, and behaved as if they had read in her eyes a responsiveness to their lascivious feelings which she never shared. She thought there must be something wrong with her physically, to produce such a reaction in strangers. Physical examination was quite negative. I had known the family for some years, and knew the high reputation the girl had, both with her employer and with her associates generally. She denied at first ever having had sexual feelings, and went away with a general reassurance about her health; returning some weeks later, she admitted masturbation from early girlhood, but claimed she had now overcome the habit, and was never troubled in that way. Within a year, she was in an asylum where she masturbated shamelessly, and made erotic advances to the attendants.

Such a history, many of you no doubt can duplicate, and none will dispute that the girl was reacting to sex stimuli, inhibited from direct expression. On attempting a closer analysis, wide divergence of viewpoint becomes apparent. According to the Freudians, the powerful sex impulses pressing for satisfaction are here in conflict with the girl's developing standard of morality; in consequence, they become forgotten, repressed from consciousness by an active psychic process, and fall into the unconscious, from which they are prevented direct escape by the action of the censor, which corresponds to the conscience of the patient. But though banished and prevented direct expression, these repressed desires retain their energy and find indirect outlet through the symptoms complained of.

Hamilton makes a very interesting attempt to translate the Freudian concepts of repression and indirect expression, illustrated by my sex-possessed patient, into the language of behaviourism. "When an organism," he says, "is unable to acquire relatively complete unresponsiveness

to a stimulus, direct responsiveness to which is disadvantageous, it tends to react indirectly and usually dysteleologically, to the stimulus." An ingenious experiment with monkeys offers an experimental example of the mechanism of Freud's "repressed desire" with indirect outlet.

> Timmy, a male, and Kate, a female monkey were confined for some days in one of the eleven small compartments into which a tall narrow cage was subdivided. While so confined, Timmy simply bullied his mate without attempting to injure her. A male dog was then introduced into the floor of the compartment. Timmy cautiously descended to the floor, played for some time with the dog, and finally attempted to copulate with him. This was resented by the dog which growled and snapped, causing the monkey to beat a hasty retreat up the side of the cage. From a safe distance, Timmy gnashed his teeth and croaked angrily, evoking fierce barking and upward leapings from the dog; this reciprocal behaviour was repeated several times. The monkey then ignored the dog altogether and began to look about him in all directions, angrily gnashing his teeth but never looking down at the barking dog below. He then slowly ascended one side of the cage, still gnashing his teeth, till he could see the tip of Kate's tail hanging over the shelf above. At this Timmy made a dash for Kate and attacked her so savagely that she had to be rescued. Other male monkeys showed the same tendency to discontinue direct responsiveness to the dog and to attack unoffending hitherto friendly mates.

Hamilton considers that, in these cases, the primary stimulus remains dynamic for behaviour rather than the inhibited primary adjustive impulse, as he calls Freud's repressed desire.

In any case, whether one inclines to the Freudian, the more orthodox psychological, or to the behaviouristic standpoint, all agree in treatment —the necessity for the patient to overcome his amnesia and face his real difficulties in a rational way.

One further physiological mechanism must be referred to, as it is of great importance in psychopathology—"the conditioned reflex". Pavlov showed that, when attractive food is presented to the nose of a dog, saliva is poured out and that if on several occasions a bell is sounded at the same time as food is presented, the sound of the bell alone will in time suffice to evoke a flow of saliva. Similarly, Watson showed that if a green light be flashed repeatedly in front of a subject whose foot was at such instant electrically stimulated, the upward jerk of the foot which was the normal response to the electrical stimulus, would in time be induced by the flashing of the green light alone. Watson further suggests that conditional emotional reflexes can be similarly aroused. This principle is very valuable in explaining some at least of the irrational fear reactions or phobias which are otherwise so puzzling. The following case may be cited in illustration of the principle of the conditioned reflex.

A married woman of forty complained of attacks of palpitation, of pain in the cardiac region, associated with numbness and trembling of the hands, ending in twenty minutes or so in a crying spell and exhaustion. Such attacks had come frequently for some years without obvious cause, and now threatened to interfere seriously with her enjoyment of life. Physical examination was quite negative; she had always been assured, on previous examination by other doctors, that her heart was normal. Pressed to recall if possible when the first heart attack occurred and in what connection, in a two hours' sitting she was able to her great surprise to do so. About fifteen, being musical, she had dreams of a professional career but her father refused to allow her further musical education. With the help of an elder brother, however, she took lessons in secret for some years and even appeared on local platforms. This came ultimately to her father's ears and gave rise to some bitter scenes between them, in which she naturally suffered from palpitation, pains in the heart, trembling, weeping and exhaustion. The memory of the cause faded, but the attacks recurred and continued after her father's death, and after all dreams of a professional career gave place to a busy and happy married life crowned with healthy children. Yet she now significantly recalled that the heart attacks came particularly when she attended concerts, or if she overheard quarreling even among strangers. I pointed out to her that she could now choose whether she would react to an old situation, previously influencing her unwittingly; her attacks at once disappeared and have not returned in the last three years.*

Phantasy is a primitive form of mental activity, normally seen in the make-believe of children, but indulged in to a varying extent throughout life. One hardly realizes—though the popularity of the movies and of much of the current literature should teach us—how often when difficulties occur in life, the realm of phantasy appeals with its easy triumphs, with its psychic opium. It is a dangerous and enervating world to linger in too much. So many are influenced by their past. "Situations and experiences," says Hinkle, "which should have been completed and finished long ago are still dwelt upon and lived with. Images and matters which once were important but which normally have no significance for their later age are still actively influencing their lives."

In these days of hurry, the *value of rest,* relative or absolute, for some types of neurotics is apt to be forgotten. The overworked farmer's wife who is becoming nervous, may require a little more consideration from her husband who has thoughtlessly allowed her to reach the breaking point, and a girl to help in the house temporarily at least, may be necessary. In more severe cases, a prolonged stay with friends, with freedom from work and worry, and with generous diet, enables the patient to regain weight and mental poise, confident reassurance being sufficient psychotherapeutics. In a few cases, one must institute in hos-

* In the address the histories of other similar cases were given, but are omitted for lack of space.

pital a modified Weir Mitchell treatment for some weeks, followed if possible by a complete change before return home. Rest in bed in hospital or nursing home is also required in neurotic and emaciated young women who without any physical cause have been taking less and less food. Here, with the patient's appetite gone, it is often wise to commence on Dubois' milk diet—two and one-half ounces of milk every two hours for the first day, the quantity of milk being rapidly increased to three quarts daily, after which full diet can be given, if the physician has secured the patient's co-operation and confidence by tact and calm reassurance. Barker has recently endorsed the value of Dubois' milk diet in commencing treatment of such cases.

Home treatment of an emaciated girl is very unsatisfactory; supervision of letters and of visitors is necessary in hospital; as the patient improves, she is encouraged to discuss her present difficulties and problems of the home. Armed with this knowledge and with a growing insight into the patient's personality, the physician may be able to suggest certain obviously advantageous changes at home, and secure the co-operation of the family, or by getting the patient frankly to face her problems, may assist in mental readjustment, or at the worst, acceptance of a difficult family situation.

In all ages, we may find that simplification of life is necessary in treatment; the business man, becoming sleepless and neurotic, must give over detail work to subordinates and take longer hours for recreation; the teacher must perhaps sacrifice her Sunday school and church work, so securing rest at the week end; the middle-aged woman with heavy household duties, must give up some of her social activities, while those who have inherited an obviously unstable nervous system, must respect their limitations by choosing light occupation and simple environment.

Janet has particularly drawn attention to the *value of excitation* in certain psychoneuroses; "How many people fall sick because they have nothing of interest to do, because their life is commonplace, dull and monotonous; because they have no hope, no ambition, no aim; because no one is interested in them, and because they see no prospect of arousing any one's interest." Thus it is insufficiently recognized that among the young women of the well-to-do classes of the present day, many neurotic symptoms arise, simply from the lack of an absorbing interest or hobby. Marriage is no longer the be-all and end-all of women's existence; with business and professional careers now open, many young women are dissatisfied at home. Hence the physician can sometimes effect a transformation in his patient by getting her to take up work of some kind, or by overcoming the objections of parents to her legitimate aspirations in business or professional lines. So too, there is the problem of the

woman of middle age, who married young, who was too busy rearing her family to develop other interests and who now finds, with children grown up and married, with ample help at home, little to occupy her.

In many cases, it is not wise to be content with reassurance, encouragement and suggested readjustments; the symptoms, neurotic though they be in origin, may reasonably be attacked directly. Much of the success of osteopathy seems to be due to the impression made on the patient of having something done for them, and it is high time for the physician to utilize massage, hydrotherapy, special exercises, etc., more than he does. Where then a cure or marked improvement cannot be effected by psychotherapy alone, it is absurd for the physician to refuse the aid, largely suggestive though it may be, of physiotherapy, nor need the assistance of drugs such as adalin, bromides, etc., be altogether despised in our professional zeal for scientific treatment.

References

(1) Hamilton, Objective Psychopathology, 1925. (2) Janet, Psychological Healing. (3) Freud, A General Introduction to Psychoanalysis. (4) Ross, The Common Neuroses. (5) McDougall, Outline of Psychology. (6) McDougall, Social Psychology. (7) McDougall, Functional Nerve Disease, edited by Crichton Miller. (8) Hinkle, Psychology of the Unconscious—Jung. (9) Hunter, The Application of the New Psychology by the Internist and General Practitioner, *Can. Med. Ass. Jour.*, October, 1922.

Public Health Nursing Education and the Undergraduate Nurse*

By E. KATHLEEN RUSSELL, *Reg. N., Director, Department of Public Health Nursing, University of Toronto.*

IN introducing this subject I want to ask your attention to an incident of some sixty years ago. It was the summer of 1867 and a meeting of the British Medical Association was in progress in Dublin and a young Scotch surgeon was speaking. From an address pregnant with meaning for the whole future of surgical practice I would ask your attention to one sentence. This is what we hear the speaker saying: "I have devoted a good deal of attention to this (class), but I have not as yet pleased myself altogether with any of the methods I have employed." It was the great Lister who was speaking. Although but forty years of age, he had already worked for years upon the study of inflammation and had done an immense amount of lasting work, but in truth he was only at the beginning of his life's work and he could not see whither the road led. In the midst of his search for truth what are the characteristics of his speech? We note a conviction of success, but unlimited patience and self-criticism as the means to success.

May I use the weight of such an example to beg for a similar *critical patience* in approaching our own problems. Or may I let those words that I have quoted serve as my apology for the tone of my paper. For I can only present to you doubt and uncertainty about our present methods in the matter under consideration. But it is doubt and uncertainty offered in a hopeful manner. A willingness to experiment with equal willingness to learn from our experimentation will lead us along the scientist's path to truth.

To make the subject matter of this paper clear from the outset it is necessary to apologize for its title. I was asked to write concerning "public health nursing and the undergraduate nurse" and have finally decided to use that somewhat ambiguous title, for although it is confusing perhaps it serves our purpose best in the present circumstances. We do indeed wish to discuss the so-called public health nursing courses now given to hospital pupil nurses, but my main thesis is that the purpose in giving those courses is not to teach public health nursing but

* Read at the meeting of Canadian Nurses' Association, Ottawa, Aug. 25, 1926. Published also in the November issue of the *Canadian Nurse*.

rather something concerning the general subject of health or public health, and therefore it is this latter,—a different subject—that becomes in reality the topic of my paper. Perhaps this argument will become clearer as we proceed.

We find ourselves committed then to a consideration of health or public health teaching in relation to the pupil nurse. Note those words "in relation to the pupil nurse," for that phrase puts certain definite bounds about our subject and, indeed, gives us the key point in the whole argument. It means that we are discussing the education of the young woman who is in the hospital nursing school in order to acquire the art of bedside nursing. I am taking as my basic argument that the whole duty of the hospital school lies in the preparation of a good bedside nurse, while seeing to it that the hospital patients are well nursed at the same time. If the hospital school performs that double service well it will have fully justified itself as one of the most useful of all educational institutions in the community, while until it has had the opportunity to do that well it seems that it has little right to confuse the issue with other responsibilities, and certainly other groups have no right to make further demands upon such a school. These opinions refer to the hospital nursing school of to-day in Canada and imply a recognition of the average conditions reasonably to be expected for such a school. Future developments may offer changed conditions, but such matters are far beyond our present consideration.

Is there then any relation between certain health teaching and the preparation of a good bedside nurse? It is sincerely believed that there is such a relation and that certain instruction of this kind is needed by every bedside nurse in order that she may be reasonably well prepared to meet her responsibilities and opportunities *as a bedside nurse*. A careful consideration of the reasons voiced by nursing schools for giving public health courses (unfortunately called public health *nursing* courses) to their pupils reveals the fact that most of their objectives are related to bedside nursing. Let us sum up all such purposes as stated by the hospital schools when they ask for these so-called public health nursing courses: these appear to be five in number—

1. To give vocational guidance to the pupils; thus some—presumably those who are well adapted—are led to choose this branch of work for their future occupation.
2. To give all pupils a necessary interest in health for the benefit of their future patients, an attitude that will demand health for the patient, not mere absence of a present group of symptoms—a particularly significant factor when nursing children.

3. To give a knowledge of hygiene, particularly personal hygiene for the benefit of the nurse herself and equally for the benefit of her patient.
4. To let the pupil see patients in their own homes, and thus to make of her a better bedside nurse because of the more intelligent sympathy developed thereby.
5. To give each pupil a knowledge of the community's health department in order that she may interpret community resources to her patient.

You will note in this list that the first purpose, *i.e.*, vocational guidance, does not refer to the pupil as a bedside nurse nor suggest any help to improve that preparation, but that every one of the other four does definitely aim to make a better equipped bedside worker. Summing up the last four, we find we are asking for interest in the patient's health, knowledge about the laws of health needed to teach the patient, and more sympathy with, and understanding of, the patient as a human being. Worthy purposes indeed for all nursing schools; and the burden is laid upon us to show how such purposes can be realized. If certain health courses or public health courses can accomplish these things, then surely all schools will want those if they can be obtained. Before leaving the matter of purposes, it seems necessary to turn for a moment to a negative aspect of the question. We must emphatically deny any desire to give in these public health nursing courses, as now conducted, technical preparation for that specialized work called public health nursing. That technical preparation is a specialized training only to be given in a special school.

We now come to a consideration of the methods at present used by nursing schools for obtaining this health teaching for their pupils. If we study the present programmes of the schools we find the following indications, partly deliberate procedure, partly unforeseen but inevitable development:

1. A very small but a growing amount of instruction given in the school concerning health or hygiene.
2. A faintly perceptible change of attitude upon the part of medical instructors, so that preventive medicine is being taught to a slight degree together with curative medicine.
3. Special courses arranged with public health nursing organizations, courses which are usually meant to cover all of the objectives stated above.

A fourth might possibly be added, *i.e.*, special terms of service with the hospital social service department, but we must admit that when this experience is given to the pupil it is generally used for the purpose

of teaching the theory and technique of social case work, and there is not much idea or purpose of giving health instruction or developing health interests.

We find then, that the hospital schools are trying to bring health instruction to the pupil nurses in two ways, first through a change in the didactic teaching given in the hospital, and secondly through sending the pupils out of the hospital to take a short course with a public health nursing organization. It is this latter procedure that claims our attention.

Throughout the past few years the idea has been growing that the hospital school owes this public health nursing experience or course to its pupils, and further that the giving of this course to its pupils is a duty that the hospital school owes to the community. In consequence heroic efforts have been made by some schools to do this thing. The effort displayed has had two results. In the first place it commands our respect for the sincerity of those superintendents who have been determined at all costs to keep faith with the young women who have come to them as pupils, for the effort has been costly in every way. Also this effort has given us some actual experience of what can be done for pupil nurses in short courses with public health nursing groups. It is from this experience that we now wish to find guidance for the future. If we examine the short course in public health nursing as tried in this country and in the United States we find certain general characteristics as follows:—

For this course the pupil is sent away from her hospital to work with a P.H. department.

It is usually given to the pupil nurse during her third year in the hospital school.

In length it varies from a minimum period of one month to a maximum of four months. During this time hospital work is discontinued.

In some hospitals all the pupils are given this course, in others only a selected number.

This course generally contains a large amount of practical experience with the staff nurses of the Public Health Organization, and a small amount of didactic instruction. The subject usually studied in the lectures and conferences is the practice of public health nursing.

The plan has been put into operation quite extensively in the United States, and a few Canadian schools are trying it, though with less formality than the American schools. For instance, nursing schools all over the country have sent a few pupils to the Victorian Order for brief periods of work for years past. The Municipal Department of Public

Health of Toronto has received pupil nurses from the Toronto hospitals for the last seven years, and other instances might be added. What is the present opinion about this procedure? From the United States comes much conference about extending and improving this work, but we think also that we hear there a note of doubt about the wisdom of the whole plan. For ourselves in Toronto, we must also express doubt. After a limited experience with it we are inclined to question the thing we are doing in sending these pupil nurses outside the hospital for a study of public health nursing. There is, undoubtedly, value in the procedure, but always in a school curriculum we must consider ***not value alone but relative values.***

The adverse criticism of this present plan suggests the following points:—

1. It breaks into the hospital work of the pupil nurse and, by withdrawing her from the wards, lays a further burden on an already over-burdened nursing service and also upon an over-burdened pupil. That argument has many ramifications, but it need not be laboured for this audience.
2. It lays a heavy, an unjustifiable, burden upon the public health department receiving the pupils if a large, indiscriminate group is sent to them.

These two objections are serious enough because of their administrative and economic implications, but, even so, they probably do not present the most serious aspect of the matter. There is another and a more important objection, namely, the suggestion that this course with a public health nursing group defeats its own purpose if meant to affect the pupil nurse as a student of bedside nursing. By sending this pupil away from her hospital the whole piece of instruction is treated as something apart from the regular bedside work, all the emphasis is placed upon making it an extraneous matter. The pupil nurse leaves her hospital work behind her while she works with the public health nursing group, and she closes the door upon her experience there when she resumes her hospital training. Such attitudes and interests as this course has developed are deliberately dissociated from her bedside work. I repeat, we deliberately dissociate and yet our objective is association! And, further, no steps are taken to give the bedside practice the desired associations. Good teaching practice seems to demand that we seek some different method, some means of giving this instruction within the hospital as part of the responsibility of the staff of the nursing school. We would suggest that a plan for the effective teaching of health as needed by the hospital pupil requires the consideration of three matters in the school. We shall list these briefly and then discuss them more fully:

1. The attitude or preparation of the nursing staff of the school.
2. The informational courses on hygiene or health.
3. The department or departments of the hospital through which the pupil is to be introduced to the patient's home.

First, we have listed the attitude and preparation of the staff of the school, and that seems all-important for, if it is significantly a question of an attitude to be learned—the attitude that will interest every pupil nurse in the health of her patient and lead her to demand that,—then the issue depends upon the knowledge and attitude of the entire staff of the school, upon the nursing staff even more than the medical, although the latter will also have its effect. When the members of the nursing staff of the school are interested in the health of the patients, when they know and understand and teach health, then, and not until then, will the pupils of that school become interested in health and become teachers of health. The attitude of the nursing staff dominates the whole situation, and no plans nor methods nor courses, no time spent nor money bestowed, will have effect until this all-important factor is assured.

Secondly, certain informational course on hygiene or health must lay a foundation of knowledge, a knowledge that will be related first to the life of the pupil herself and next to the life of her patient. To secure that relating of health practice to the pupil's own life it must be made the responsibility of someone to see that both *opportunity* and *motive* are supplied. If we could compare some of the procedures of the daily life of pupils in a hospital nursing school with that of the pupils in a physical education school we might get some startling contrasts, and yet the nurse lives in the midst of medical knowledge, and is surrounded by the proof of what happens when the laws of health are ignored. Is it not strange that so much warning fails to find association with the observer's own life?

Finally, there is still the matter of a special Department or of special Departments through which the pupil will be introduced to the homes of some of her patients. This, as we have already said, should give her a far clearer sense of realities and values in connection with her patients and thus make of her a more intelligent as well as a more sympathetic bedside nurse. Surely we cannot afford to ignore such matters. Also this entrance to the home should be used to give the pupil some consideration of family and community health problems so that she may see her own work in relation to that of her sister, the public health nurse. We contend that this contact with the home, if it is to serve the purpose stated, should be made through the hospital while she is working with her patients there and as a part of that work. If this contact with the home could be carried on through the co-operation of the

social service department and the out-patients' department at a period when bedside work is also being done, the resultant sympathy and understanding might surely be relied upon and could be directly associated with the sick patients then being nursed. This suggestion that the social service and the out-patients' departments should be used for this special purpose is not original: there are various attempts at such a method already in operation. The one notable experiment at Yale University embraces this idea, but discussion of that particular work must not be allowed to confuse the present argument, for both the purpose of the work at Yale and the conditions there, as I understand them, are quite apart from the purpose and conditions of the average hospital nursing school which we are considering. This same idea concerning the use of the out-patients' department is treated in a very interesting report upon the matter issued by the American League of Nursing Education last autumn. Also we find the same method already suggested in some of our own nursing schools. All specific plans for such teaching through the utilization of these special departments must be worked out separately in each school, for we cannot here consider such detail. However, this fundamental question of method must first be settled, and it is a question of equal interest to all schools, large and small, rural and urban. If we decide that health must be taught from within the school, then we immediately face the problem of staffing the schools with nurses possessing the required health knowledge and interests. However, that again is another subject and beyond the scope of this paper.

Before closing the discussion of the use of a public health department for the instruction of hospital pupils there is one more thing to be said. It still seems to be desirable that a school, where possible, should make some arrangement with a public health department or organization in order that its pupils may make brief visits therein and have, each one, a glimpse at least, of the modern health resources of our towns. Such visits could be made at a slight cost of time upon the part of the school and the health department. In that connection we come very close to another side of this whole argument, one which demands mention here in order to offset some possible misunderstanding. I refer to the case of the voluntary public health nursing organization which may wish for various reasons, selfish or altruistic (using those words in a strictly literal sense) to offer short courses of practical work to a selected group of senior pupils from the hospital. There may be excellent reasons for including such a piece of experience in the training of a few of the pupils, although we must note that it cannot be offered to more than a small fraction of the hundreds of nurses in training in our hospitals. Such experience is not condemned. We are merely insisting

that it does not belong very closely to the argument of this paper, for it cannot serve as a substitute for health teaching related to the daily bedside work of the pupils in the wards. It is true indeed that for a selected group of pupils experience with an organization which does visiting bedside nursing may be made a valuable supplement to the hospital teaching.

In summing up I would offer four conclusions for your discussion:

1. That the teaching of public health nursing has no place in a hospital school for nurses.
2. That certain health or public health instruction is required in the hospital school.
3. That the teaching of health or public health has only place in the hospital school in so far as it improves the preparation of a bedside nurse.
4. That the one present method of trying to give this health instruction outside of the hospital school is of doubtful value, and that we should make more careful study both of it and of other methods.

A Survey of the Results of Routine and Other Wassermann Tests in the Toronto General Hospital for the past Ten Years

By H. K. Detweiler, M.D.
Senior Demonstrator in Medicine, University of Toronto.
Associate Director, Serological Laboratories, Department of Pathology, University of Toronto.

During the ten years from January, 1916, to the end of December, 1925, there have been performed in the laboratories of Toronto in connection with the Toronto General Hospital, a total of slightly over 75,000 Wassermann tests. During the year just past, 10,537 tests were made. These figures give some idea of the amount of work being done in a single department of a university hospital laboratory, and the large number of tests, in conjunction with more accurate clinical information than is possible in any other type of laboratory, should merit the attention of the medical profession as a whole, and particularly those interested in the problems of public health. As a uniform technique has been employed, and the supervision has not changed during the entire period of ten years, the results should be reasonably accurate and reliable for statistical purposes. It is thought wise, therefore, to place these figures on record in the hope that other medical centres in Canada may be induced to do likewise, and in this way assist in ascertaining the truth about the prevalence of syphilis in this country.

Technique.—Since the technique employed in this laboratory has been described in the literature from time to time, and a very detailed account of it has been published in the *Practice of Medicine,* edited by Tice,[1] it is considered unnecessary to make more than a passing reference to our methods. Briefly, a cholesterinized alcoholic extract of human heart is used as antigen, with an antisheep hemolytic system and hot air incubation at 37° C. Since the latter part of 1922 all Wassermann tests have been checked by the Kahn test. This combination has proved most satisfactory.

Results of routine Wassermann tests on in-patients.—Since October 13, 1925, routine tests have been performed on practically all admissions

Reprinted from The Canadian Medical Association Journal 1926, XVI, 800-803.

to the public wards of the hospital. The results of these tests are shown in Table I. It will be noted that the total of 27,115 tests was almost equally divided between males and females and that the incidence of syphilis in males as shown by these tests is 7.7 per cent as compared to 5.2 per cent in the females. It should be remarked here that this table is made up entirely of patients over fourteen years of age, the infants having been computed separately, and all other children being excluded from the public wards of the General Hospital.

It is of interest to note the incidence of routine positive Wassermann tests by years. This is well shown in Chart I. There has been a general trend downward from the year 1916 to the year 1921, since which the figures have remained remarkably constant. Whether this earlier drop has been due to the inauguration and development of the so-called Special Treatment Clinic in the Out-Patient Department, in which the ambulatory cases of syphilis are treated, cannot be stated dogmatically at this time, but such an explanation seems probable to the writer.

Table II shows the incidence of positive Wassermann tests in the new-born. These figures correspond closely to those published by Williams[2] in the Johns Hopkins Hospital in 1920, namely about 1 per cent. It should be stated here that the tests on these infants were performed on the cord blood removed by syringe immediately after birth.

The out-patient department.—Routine tests are not made on outdoor patients. In the Special Treatment Clinic above referred to, statistics based on routine tests would be misleading as to the incidence of syphilis. Important information can, however, be obtained from such a table as No. III, which shows only the *new* cases of syphilis admitted to this clinic. These figures go back only to the last five months of 1921 but show a total of 1360 new cases admitted to the end of 1925. An encouraging feature of this survey is the substantial increase in the number diagnosed in the primary stage. As might be expected, the table shows that comparatively few females are diagnosed in this stage.

Of the remainder of the out-patient services, most of the specimens of blood for Wassermann tests come from the General Medical Clinic. Table IV shows the results from 1920 to 1925 inclusive. It will be noted that the test is being used more and more as time goes on, but it is very evident that of the large number of patients applying for treatment in the Out-Patient Department, many cases of syphilis are escaping detection because of failure to use the test more freely. This statement gains weight from the fact that in spite of careful investigation in the wards, only about 40 per cent of syphilitics are diagnosed apart from the Wassermann test. Keidel and Moore[3] state that in the Johns Hopkins

Hospital, no department in the Out-Patient Services was more than 35 per cent efficient in detecting syphilis on clinical grounds.

The Hospital for Sick Children.—Our laboratory has been performing the Wassermann tests for the Hospital for Sick Children for a number of years. Clinicians in that hospital found that routine tests showed an incidence of only about 1.5 per cent in their wards, and consequently abandoned the test as a routine. Their actual findings which led to this decision are as follows:

WASSERMANN TESTS—INFANT WARD: HOSPITAL FOR SICK CHILDREN*

Two years ending April 30, 1925

Number diagnosed clinically and confirmed	6
Number diagnosed clinically and *not confirmed*	0
Number suspected and found positive	10
Number suspected and found negative	14
Not diagnosed nor suspected and found negative	1129
Not diagnosed nor suspected and found positive	2
Total number of Wassermanns taken	1161

Total number of positive 18 = 1.5%.

Table V shows only the *new* cases of syphilis admitted to that institution or attending its Out-Patient Department, as detected by tests made on suspicious or evident cases, or on cases presenting difficulty in diagnosis.

Summary.

In the ten years just past, over 75,000 Wassermann tests have been made in the laboratories of the University of Toronto, in connection with the Toronto General Hospital.

The incidence of syphilis in the wards of the hospital has dropped from 10.4 per cent. in 1916 to 5.8 per cent. in 1925. This drop has been coincident with, and may be due in part to the development of an efficient out-patient clinic for syphilis. The incidence of syphilis as shown in the routine tests in the wards of the Toronto General Hospital compares favourably with the incidence reported from similarly situated hospitals in other cities.

Only 1.1 per cent of the new-born in this hospital are found to have

* This information was kindly supplied to me by Drs. Erb and Price of the Hospital for Sick Children Pathological Laboratories, to whom I am indebted for permission to use it.

a positive Wassermann test. Many syphilitic mothers bear non-syphilitic children.

In the special clinic for syphilis in the Out-Patient Department of the Toronto General Hospital, more cases of primary syphilis are being detected now than in former years, but the figures for the new cases of tertiary syphilis remain so high that it becomes very evident that efforts for the education of the general public regarding the dangers of this disease must be redoubled if the victims of infection are to be attracted to the clinics at an early stage of the disease.

Routine tests in the Out-Patient Department would in all probability enable the staff to detect many cases of unsuspected syphilis. Evidence has accumulated from various medical centres showing that clinical examination and history-taking are only from 35 to 40 per cent efficient in diagnosing syphilis in adults.

In the Hospital for Sick Children, Toronto, careful statistics show that an extremely small percentage of syphilitics are detected by the routine Wassermann test that would otherwise be missed. They have, therefore, abandoned the routine use of the test, but employ it freely in all suspected cases. The incidence of syphilis in their wards is very similar to that of the new-born at the General Hospital, namely, 1.5 per cent.

It is hoped that other medical centres in Canada may be induced to place their figures on record in some such way as has been attempted here and thus assist in ascertaining the truth about the prevalence of syphilis in this country.

References

(1) Tice, Practice of Medicine, W. F. Prior Co., 1918. (2) Williams, J. W., *Johns Hopkins Hos. Bull.*, 1920, xxxi, 335. (3) Keidel, A., and Moore, J. E., *Johns Hopkins Hos. Bull.*, 1923, xxxiv., 383.

---

* Contribution from the Department of Medicine, and the Department of Pathology, University of Toronto. Read before the Labortory Section, Canadian Public Health Association Annual Meeting, May 5, 1926.

TABLE I

ROUTINE IN-PATIENT WASSERMANN TESTS

Year	Male			Female			Total		
	Number	Number positive	Percentage positive	Number	Number positive	Percentage positive	Number	Number positive	Percentage positive
1916	(Oct. 13 to Dec. 31)						800	83	10.4
1917							3,869	385	9.95
1918	2,298	143	6.2	1,091	58	5.3	3,389	201	5.9
1919	1,086	102	9.3	1,025	83	8.0	2,111	185	8.8
1920	1,175	139	11.8	1,639	116	7.0	2,814	255	9.0
1921	1,458	124	8.5	2,151	104	4.8	3,609	228	6.3
1922	1,671	100	5.9	1,718	71	4.1	3,389	171	5.0
1923	1,771	121	6.7	1,783	101	5.8	3,554	222	6.2
1924	1,869	143	7.6	2,173	84	3.8	4,042	227	5.6
1925	1,904	135	7.0	2,303	111	4.8	4,207	246	5.8
Total	13,232	1,007	7.7	13,883	728	5.2	27,115	1,735	6.4

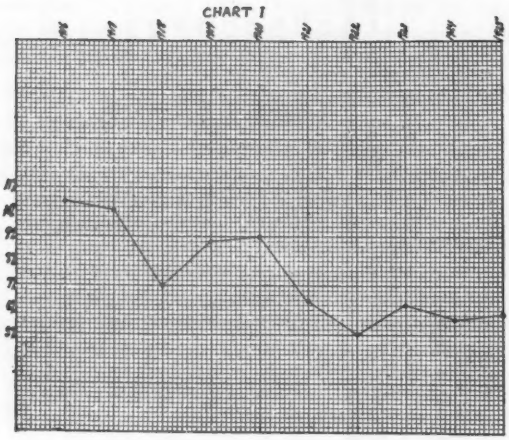

TABLE II

ROUTINE WASSERMANN TESTS IN THE NEW-BORN

Year	*Number*	*Number positive*	*Percentage positive*
1918	341	7	2.0
1919	382	1	.2
1920	345	6	1.7
1921	337	2	.5
1922	187	0	0.0
1923	212	6	2.8
1924	290	3	1.0
1925	385	4	1.0
Totals	2479	29	1.1

TABLE III

NEW CASES OF SYPHILIS—SPECIAL TREATMENT CLINIC.

	Male			*Female*			*Year Sub-Totals*			*Year Totals All Types*
	Primary lesion	*Secondary lesion*	*Tertiary lesion*	*Primary lesion*	*Secondary lesion*	*Tertiary lesion*	*Primary lesion*	*Secondary lesion*	*Tertiary lesion*	
1921 (5 mos.)	17	5	64	1	6	42	18	11	106	135
1922	18	9	200	2	14	103	20	23	303	346
1923	14	22	178	0	7	108	14	29	286	329
1924	13	12	133	1	16	83	14	28	216	258
1925	26	9	150	2	4	101	28	13	251	292
Totals	88	57	725	6	47	437	94	104	1,162	1,360

TABLE IV.

WASSERMANN TESTS OUT-PATIENT DEPARTMENT

(Not including Special Treatment Clinic)

	Male			*Female*			*Sex Unknown*			*Total*		
Year	*Number*	*Number positive*	*Percentage positive*	*Number*	*Number positive*	*Percentage positive*	*Number*	*Number positive*	*Percentage positive*	*Number*	*Number positive*	*Percentage positive*
1920	60	9	15.0	24	2	8.3	22	3	13.6	106	14	13.2
1921	319	25	18.9	177	22	12.4	29	1	3.4	525	48	9.1
1922	527	29	5.5	254	22	8.6	36	2	5.5	817	53	6.4
1923	618	37	5.9	328	22	6.6	35	9	25.7	981	68	6.9
1924	631	47	7.1	436	34	7.8	12	1	8.3	1,079	82	7.5
1925	667	46	6.8	383	22	5.7	0	0	0.0	1,050	68	6.5
Total	2,822	193		1,602	124		134	16		4,558	333	7.3

TABLE V

NEW CASES OF SYPHILIS—HOSPITAL FOR SICK CHILDREN

	Male			*Female*			*Sex Unknown*			*Total*		
Year	*Number*	*Number positive*	*Percentage positive*	*Number*	*Number positive*	*Percentage positive*	*Number*	*Number positive*	*Percentage positive*	*Number*	*Number positive*	*Percentage positive*
1918....	33	6	18.1	27	6	22.2	205	19	9.2	265	31	11.6
1919....	105	10	9.5	95	11	11.0	132	13	9.8	332	34	10.2
1920....	788	73	9.2	703	76	10.8	119	6	5.0	1,610	155	9.6
1921....	564	17	3.1	461	26	5.6	22	3	13.6	1,047	46	4.4
1922....	814	28	3.4	701	34	4.8	34	1	3.1	1,547	62	4.
1923....	943	34	3.6	799	40	5.1	65	5	7.6	1,796	79	4.4
1924....	849	25	2.9	672	33	4.9	68	1	1.5	1,589	59	3.8
1925....	716	22	3.0	623	23	3.6	2	0	0.0	1,341	45	3.4
Total..	4,801	215		4,081	249		645	48		9,527	511	5.4

Objectives and Standards of Ventilation

By C. E. A. WINSLOW, NEW HAVEN, CONN.

(*Continued from last issue.*)

We find ourselves, then, face to face with the fact that plenum ventilation providing 30 cu. ft. of air per minute per child, in the ordinary schoolroom, is not only economically wasteful but fundamentally harmful to the health of the school child since it implies and involves an overheated atmosphere; and if such a degree of air supply is needless the system of fan ventilation itself becomes unnecessary. I believe, therefore, that the state laws and regulations requiring the installation of systems of this type, wise and judicious as they seemed in the light of the knowledge of 25 years ago, are today wholly unjustified and harmful, and that it is the duty of all of us to see that they are promptly repealed.

It must be clearly understood, however, that the conclusions I am enunciating bear only on the average schoolroom, so situated that the application of the system of modified window ventilation can be safely and conveniently applied. In the auditorium and in the large office or crowded factory workroom conditions are wholly different. In a room containing much more than 50 people, ventilation by the modified gravity system would generally prove inadequate in view of the difficulties of securing a properly distributed air change throughout the room and in view of the excess of heat production within the room as compared wtih heat loss through its walls. For such an occupied space, plenum ventilation offers as I see it the only possible remedy, and in dealing with such rooms the standard practices of your profession have proved themselves adequate, satisfactory and economical. I look for an unprecedented future development in the field of technical industrial ventilation as industries come to realize the profound influence upon efficiency of the overheating which is now so general in the factory and workshop. Vernon's studies in the tin plate mills of England showed for example a reduction of 13 per cent in summer output in badly ventilated plants as against only 3 per cent in plants provided with adequate artificial ventilation. In dealing with such problems as this, frankly and definitely on the basis of heat removal, your profession can render a great service to industry and to the public health as well.

In factories where industrial poisons such as carbon monoxide and lead dust, and benzol are present, and above all in industries where susceptibility to tuberculosis is increased by the presence of silica dust, there is another rich field for the ventilating engineer which is ripe for the harvest. In a certain axe factory in Connecticut the tuberculosis death rate among grinders and polishers was for a period of 20 years, ten times as high as the rate which existed among their fellows not exposed to the same deadly atmosphere, and the reports of the Registrar-General of England and Wales show that of the eight industries showing a tuberculosis rate more than twice the normal, six were exposed to the inhalation of silica dust. In such cases as this the installation of exhaust systems with properly designed hoods, adapted to the particular machine which produces the dust, and with ducts and fans arranged to maintain adequate suction velocity, is a task of the first importance and one which calls for the exercise of the highest skill of your profession.

In dealing with these latter problems which I have discussed the ventilating engineer needs only to go forward along the lines which have been so well worked out during the past half century. In the auditorium and in the large and crowded office and workroom, above all where industrial fumes and dusts are present, it is necessary to secure an ample air change and to secure it by the use of plenum or exhaust ventilation of a positive kind. In the schoolroom, however, the studies of the physiologists have made it abundantly clear that such excessive air change is neither necessary nor desirable and that the health of the school child, as well as economy in the use of the public funds, indicates a gravity type of ventilation with window inlets as in general the procedure to be followed. To quote from a resolution unanimously adopted by the *American Public Health Association,* the professional association of American sanitarians, representing not only health administrators but laboratory workers and sanitary engineers as well:

"*Whereas* hundreds of thousands of dollars are wasted every year on this continent in the installation and operation of systems of school ventilation which are not only not beneficial but are positively harmful to the health of school children. And whereas

In the light of current knowledge, the supply of as large an air volume in schoolrooms as 30 cubic feet per minute, per capita, is necessarily accompanied with dangerous overheating of the schoolroom in order to avoid resulting drafts. And whereas

The use of ozone and other chemicals for treating schoolroom air has little or no scientific justification and little or no practical value;

Resolved: That the system of ventilating schoolrooms by fresh untreated outdoor air, admitted at the windows with gravity exhaust ducts for removing

vitiated air from near the ceiling, is the most generally satisfactory method of school ventilation; and

That state laws and city regulations interfering with such scientific and economical methods of school ventilation should be repealed in the interests of the public health."

In the task of remodeling health legislation along the lines of modern knowledge we ask you for your sympathy and your assistance. In 1900 you were right in supporting legislation requiring plenum ventilation in the schoolroom, for you were acting on the basis of the best knowledge then available. Through no fault of yours, and through no fault of the physiologists, but merely on account of the inevitable and steady progress of experimental science the rational basis for this type of regulation has disappeared. To attempt to maintain it in the face of the proven facts of physiological science may delay progress for a time; but its ultimate result will be only to bring discredit on those of us who remain blind to the new information at our disposal.

Sanitary Inspectors' Association of Canada

THE ANNUAL CONVENTION

By The Secretary

THE recent Convention, held in Brantford, Ontario, on September 1st, 2nd and 3rd, was a complete success. The only disappointing feature was the absence of members from a distance. Members and friends who registered numbered 35, but only six of these were from points West of the Great Lakes. It is a pity that so few Councils are willing to send their men to these gatherings, as, apart altogether from the regular sessions, there is much benefit to be gained by rubbing shoulders with the other fellow on such occasions, comparing notes with him and discussing common problems. We have often seen these little groups in the hotel rotunda, and on the street, and Brantford was no exception.

September 1st.

His Worship Mayor J. A. D. Slemin welcomed the Convention to Brantford in a few well chosen words. He contrasted the conditions prevailing in the average community only a few years ago as compared with the present time. People had been greatly benefited by Public Health work and he believed that this Association had done its share to that end. Alderman Fred Mann, Chairman of the Local Board of Health, stated that he took very great pleasure in supporting Mayor Slemin in his expressions of welcome.

The President, Mr. E. W. J. Hague, Chief Health Inspector, Winnipeg, Man., took as a subject for his presidential address, "Light and Health." As this address was published in last month's issue of the *Journal* it will not be necessary to discuss it here. The topic was a most interesting one, and it is sure to receive more attention from all who are engaged in Public Health work. In summing up, the President stated that the four principal needs for the health of a community were: A clean atmosphere in our cities and towns; the admission of direct sunlight to all working and living quarters, particularly in homes where there are growing children; the perfection of a window glass that would admit ultra-violet rays; the inoculation in the minds of the people of the

absolute need for direct sunlight, in Winter as well as in Summer, if health is to be maintained.

A paper on "Sewage Disposal," by Mr. A. E. Berry, C.E., Ph.D., Chief Sanitary Engineer for the Province of Ontario, was also a very technical paper, but the author succeeded in making his points quite clear and lucid. He stated that our duty was two-fold, namely: improvement of legislation and education of the public in respect to sanitation and health protection. In water supply and sewerage this two-fold function is readily applied. Septic tank systems were explained by the speaker as being a subject which presented many problems, especially to the inspector in rural districts, where different soils and other conditions called for different measures. Considerable discussion followed, one speaker suggesting that a motion in favor of the passing of a law to make provision for the equipping of homes with sanitary sewer and water connections be passed. The President named a resolution committee, consisting of W. H. Meadows, H. McGinnis, and A. J. Bolus, with the President *ex-officio*. This committee brought in the following resolution, at the Annual Meeting, which was adopted: "That the Sanitary Inspectors' Association of Canada, in Convention assembled, is of opinion that in the interests of Public Health in the Province of Ontario, the proposed regulations respecting plumbing, drainage and gas fitting should be promulgated and brought into force without further delay, and that copies of this resolution be forwarded to the Hon. Dr. Forbes Godfrey, Minister of Health, and to Dr. J. W. McCullough, Chief Officer of Health."

Dr. J. A. Amyot, C.M.G., was the first speaker at the evening session. His topic, "Powers and Functions of the Dominion Department of Health," proved to be a very interesting one.

Dr. Amyot said many of his hearers were natives of the Old Country, and it was first necessary to understand the difference in government here and in Europe. European countries had centralized government, which was the most effective government when there was an end to be obtained. There was not centralized government in Canada or the United States. Isolated settlements were founded by the pioneers from the Old World who first came to North America, and each state and province was opposed to communication with the others because of different interests. Each valued its own liberty too much to brook interference from outside. Even to-day the provinces of the Dominion and the states of the Union would oppose strenuously too much interference from the federal or central government.

Public health is better carried out and benefits more people directly in Canada and the United States than anywhere else in the world. The

reason was that the provisions of the Health Act were not enforced by the Federal Health Department, but by the municipalities themselves.

We on this side had to go to the Old Country's Laboratories and Health Departments for facts, but the application of those facts to the individual was much better performed on this side.

The Dominion Health Department's function was to attend to those things the Provinces could not do. The first was the foreign quarantine. Preventing the admission to the country of those suffering from the White Plague and other serious diseases. Individual cases could be kept track of in the Old Country, but that would be impossible on this side.

Another function of the Federal Department was to look after sick mariners, and about 280 officers were employed in this work throughout the Dominion.

Then there was the immigration question. European countries, with the exception of France, where unusual conditions prevailed, had no immigration question. The migration was all the other way, from the Old Country to the new. The Health Department's function with regard to immigration was simply to advise of the medical condition of the immigrant. The admission or deportation was up to the Immigration Department.

Food labels and the preparation of food for sale came under the supervision of the Dominion Health Department. If a package contained a mixture of two materials, that forming the largest percentage must be mentioned first. The manufacturer's name must be on the label also.

The narcotic traffic came under the attention of the Health Department and was as well controlled here as in any other country. There was a Child Welfare Department with wide organization under Dr. Helen McMurchy. Considerable research work was being done in the provinces, and the Connaught Laboratories of Toronto, accomplishing a great deal at the present time, started from a very small beginning.

The Dominion Public Health Council was accomplishing a most valuable work. It was composed of leading health officers from many centres. Later, outsiders from various representative bodies were admitted, and many skeptical, were convinced and made known to their followers the value of the work. It was a place for the provinces to meet, such as existed in no other department. It was one of the best public health influences the department had. The United States had a similar council, but because it represented a larger population and many more centres, it was less efficient. The Dominion Council brought about by common consent what could not be accomplished by law.

At the conclusion of his address, Dr. Amyot invited questions. With

regard to the narcotic law, he said it was part of the criminal code and in accordance with international agreement. This act is one of the most drastic we have and is strongly upheld by parliament, where any effort to modify it is strenuously opposed.

With regard to the possibility of acquiring more uniform health laws in the various provinces, he said the Dominion Health Council had been working to that end and their efforts were meeting with promising response. The principles of the laws with reference to infectious diseases were coming to be fairly uniform, although owing to different conditions the appplication was different.

"The Improvement of Health Conditions in Rural Municipalities" was a subject ably handled in a paper presented by J. W. McCullough, M.D., D.P.H., Chief Officer of Health for the Province of Ontario. Dr. McCullough pointed out the advantages of a full-time, trained medical health officer in a community. In too many small centres the health officer was a part-time man on a very small salary. He was greatly handicapped by lack of special training in many cases, and lack of time. Many were doing excellent work, but at the expense of their private practice.

A central full-time officer and staff might cost about $10,000 a year, but that amount could not be invested in any other way that would bring such valuable returns. Infectious diseases were controlled by the medical officer of health by quarantine and epidemics were prevented. Most important of his work was the education of the public on health problems and how to deal with them. The proper care of infants and the safeguarding of food supplies, particularly milk, resulted in remarkable reductions in infant mortality. It was poor business sending children to school who were handicapped by defective sight and hearing. There was plenty to occupy a medical officer of health full-time in any community, safeguarding the health of infants and children; ensuring the purity of water and food supplies; controlling communicable diseases to prevent epidemics, and educating the public in health matters. Some scoffed at the value of the work of the medical profession. The practice of the medical profession was based on scientific research and the profession had produced more disease preventives than the public could absorb. The part-time health officer was at a disadvantage and could not afford to do this. He had to make his living, and his salary as M.O.H. was nominal. The whole secret of the matter, the way to the improvement of health conditions, lay in the appointment of full-time health officers.

By request, Dr. McCullough was good enough to give us his address in writing, so that we hope to publish it in the near future.

September 2nd.

Dr. A. J. Slack, Ph. C., D. P. H., Acting Director of the Institute of Public Health, London, opened the morning session with a paper on "The Laboratory as an Aid to the Sanitary Inspector." We hope to publish this paper also. It contained sound principles, covering a great many angles of communicable disease work, water supply, etc., milk and milk products.

Mr. H. McIntyre of Cochrane, one of the Ontario Provincial Sanitary Inspectors, read a paper on "The Layman in Public Health Service." Mr. McIntyre made reference to the training, tenure of office, etc., of Sanitary Inspectors.

Mr. A. Rigby, Chief Food Inspector, Winnipeg, next presented a very interesting paper on "The Trend of Modern Food Inspection."

As we hope to publish both of the above papers in the *Journal,* the members will have an opportunity to read them.

During the afternoon session, three papers were read: "Ventilation —Facts and Fallacies," by Dr. Hutton, Medical Officer of Health, Brantford; "Housing and Health," by Mr. A. Officer, Tenement and Supervising Inspector, Winnipeg; "Plumbing and Health," by Mr. W. H. Meadows, Chief Plumbing Inspector, Toronto. These papers also will be published in due course.

At the close of the afternoon session, the delegates were entertained to dinner by the Brantford City Council, at the Brantford Golf and Country Club.

The evening session was taken up with the annual business meeting, and it might be well to give a brief summary of this meeting here.

Apologies of absence were received from the following and were read by the Secretary:

Thos. Lancaster, Victoria, B.C.; R. H. Meek, Vancouver, B.C. (on behalf of the Vancouver members); J. J. Dunn, Calgary, Alta.; R. H. Murray, Regina, Sask.; A. Gracey, West Vancouver, B.C.; Winnipeg Members; A. M. S. Allan, Regina, Sask.; G. P. Head, Edmonton, Alta.; J. Butterfield, Edmonton, Alta.; J. B. Whiteoak, Calgary, Alta.; W. H. Appleton, Saskatoon, Sask.; A. Warr, Brandon, Man.; A. Wright, Prince Albert, Sask.

The President appointed Messrs. Millar and Bolus with the Secretary, scrutineers to examine and report on the standing of those present.

The minutes of the last Annual Meeting were read by the Secretary and adopted.

New Members. Applications from Messrs. Alexander Crosbie, of Sarnia, Ont., James Cluney of Galt, Ont., and Lloyd Ecker of Woodstock, Ont., were submitted by the Secretary, who reported that each

application was accompanied by the necessary letters of recommendation and the subscription fee paid. On motion by Mr. Glover, seconded by Mr. Rau, Mr. Crosbie was admitted a member of the Association and Messrs. Cluney and Ecker were admitted as Associate Members.

Annual Report of the Executive. The Fourteenth Annual Report of the Executive Council was read by the Secretary. With regard to the matter of courses of instruction for Sanitary Inspectors, Mr. Millar reported that a course was contemplated by which Sanitary Inspectors in Ontario would have an opportunity of obtaining a standardized diploma. The President asked Mr. White whether he had any definite information on this matter. In reply, Mr. White stated that a movement had been on foot for some time whereby Sanitary Inspectors would receive suitable instruction. On account of the fact that many Medical Officers of Health were only part-time men, he was of opinion that the Sanitary Inspector should be given a suitable training. He thought we should show some desire to be better equipped for our job. He had discussed the matter with Professor Fitzgerald of the University of Toronto, and had a letter from the Professor, dated August 27th, in which a promise was made to provide a course of instruction under University auspices, provided a sufficient number of men would avail themselves. Mr. White stated that the City Councils would be expected to send their men to this course, which would be for a period of two weeks. He was of opinion that the certificates of the Royal Sanitary Institute and the Incorporated Sanitary Association of Scotland were not quite suitable here and that a Canadian Board of Examiners should be appointed. Mr. Bolus stated that he was of opinion that any man who had either of the diplomas referred to should be capable of carrying out the duties of a Sanitary Inspector anywhere. The President explained the new arrangement of examination by the Royal Sanitary Institute, and stated that Boards of Examiners were appointed in all parts of the Empire. He was of opinion that it would be hard to improve upon these.

The President read the circular letter sent out to the Saskatchewan members in the matter of the new association formed there.

On motion of Miss Russell, seconded by Mr. McKee, the Annual Report was adopted in whole.

The President made suitable reference to the deaths, during the year, of Mr. W. F. Thornley, late of Hamilton, Ontario, one of the first members of the Association, and Dr. W. C. Laidlaw, of Edmonton, one of our Honorary Members. On resolution moved by Mr. Rigby, seconded by Mr. Rau, the Secretary was instructed to insert in these minutes the appreciation of the services which had been rendered by the late Mr. Thornley, both as a member and as President, and for the support given

us by Dr. Laidlaw at various times. The resolution was adopted by a standing silent vote.

Branch Reports. Ontario—Mr. Millar, Branch President, read the Branch Report for Ontario. Mr. Millar thereafter brought forward the suggestion of a proposed new Association for Ontario. He was of opinion that the $5.00 fee was an obstacle. He felt sure that with a Provincial Association they could have as many members as are in the Dominion Association at present. He was of opinion that if the Province collected $5.00, out of this $2.00 could be sent to the Dominion Association. In reply, the President explained the formation of the Association from the commencement until the Edmonton meeting, when it was made Dominion-wide at the request of the Inspectors in Ontario. He pointed out that there was nothing in the Constitution to prevent the work going on as a branch. The matter of finance or any other matter could be brought up on notice of motion and the Constitution amended. Mr. White stated that he had discussed Association matters with the men in Ottawa, and that they objected to being classed as Associate Members only. After some further discussion it was decided, on motion by Mr. Skinner, seconded by Mr. Sanders, to carry on as a Branch of this Association, and that the matter of finance, etc., be dealt with through the Executive.

The Annual Reports of the Manitoba, Saskatchewan, Alberta and British Columbia Branches were read by the Secretary. The Branch Reports and Financial Statements were adopted as read.

Election of Officers. President—Mr. Bolus nominated Mr. Rigby but Mr. Rigby declined as he felt that he could not give the time necessary. Mr. Glover nominated Mr. Hague, and, as no other nominations were received, Mr. Hague agreed to carry on for another year. He thanked the members for their expression of confidence and promised to do his best for the Association.

Vice-Presidents. Ontario—Mr. McKee nominated Mr. Millar of Fort William for re-election, and as no other nominations were received the President declared Mr. Millar re-elected. *Manitoba*—The Secretary informed the meeting that it was the wish of the Manitoba members that Mr. Arkle of St. James be re-elected, and he accordingly made the nomination. As no other nominations were received, the President declared Mr. Arkle re-elected. *Saskatchewan*—Mr. Rigby nominated Mr. Wright of Prince Albert for re-election, and as no other nominations were received the President declared Mr. Wright re-elected. *Alberta*—Miss Russell nominated Mr. Butterfield of Edmonton, and as no other nominations were received the President declared Mr. Butterfield elected. *British Columbia*—Miss Taylor nominated Mr. Robertson of Vancouver

for re-election, and as no other nominations were received the President declared Mr. Robertson re-elected.

Executive Council—The Secretary submitted the following names suggested by the Manitoba Branch:—Miss Russell and Messrs. Austin, Foggie and Booth, all of Winnipeg, Man. Mr. McKee nominated these, and as no other nominations were received the President declared Miss Russell and Messrs. Austin, Foggie and Booth elected members of the Executive Council.

Auditors—The Secretary informed the meeting that the Manitoba Branch desired to submit the names of Messrs. Marshall and Barclay of Winnipeg. Mr. Rau made the nomination, and as no other names were submitted the President declared Messrs. Marshall and Barclay elected Auditors.

Secretary-Treasurer—Mr. Glover nominated Mr. Officer of Winnipeg for re-election, and as no other nominations were received the President declared Mr. Officer re-elected.

The President requested the Secretary-Treasurer to retire for a few minutes, and, on his being called into the meeting again, informed him that on motion by Mr. Millar, seconded by Mr. Bolus, the meeting had decided to give him $100.00 as an honorarium for his services during the past year. The Secretary briefly expressed his thanks for the gift.

Place of Next Meeting. The Secretary submitted invitations for the Mayors of Winnipeg and Victoria and the members in Vancouver. Mr. Rigby moved that next year's Convention be held in Winnipeg and this was seconded by Miss Russell. Mr. Bolus stated that, in view of what had transpired earlier in the evening, he thought we should meet in Toronto and moved accordingly. This was seconded by Mr. Rau and carried by a large majority.

Vote of Thanks. On the suggestion of the President the matter of writing the usual letters of thanks was left in the hands of the Secretary.

The National Anthem brought a good meeting to a close.

September 3rd.

The delegates were taken on an automobile excursion through the Niagara Fruit Belt, and at Niagara Falls the Brantford City Council again entertained us, by providing lunch at the Clifton Hotel. This trip will long be remembered by the visiting delegates.

Monthly Jottings of Sanitary Inspectors' Association

The programme for the Winter Session of the Manitoba Branch is now nearing completion. The Committee in charge report that it will be both varied and interesting. We find it not at all difficult to persuade prominent medical men and others to assist in our work by giving lectures. We think that in any large city the members would find men of the highest standing equally willing to do the same thing for them. Why not get busy at once and ensure the members a pleasant and helpful Winter season?

We are extremely sorry to have to report that Mr. W. C. Millar of Fort William, Vice-President for Ontario, has been laid aside by sickness and is about to leave for Scotland on a three months' trip with the object of restoring his health. We feel sure that the members will greatly regret this contingency and will join with us in hoping that Mr. Millar will quickly be restored to full health and vigor and be enabled to resume his activities on behalf of the Association.

We are also sorry to report that Mr. Herbert Cusack, Chief of the Division of Sanitation in the Toronto Health Department, has also been ordered by his physician to take a rest from active work for a period of a month or six weeks. Mr. Cusack represented the Toronto Inspectors at the recent Convention at Brantford, where we formed a very good opinion of his abilities and personality, and were in hopes that he would have done good work in the matter of interesting his fellow members of the Toronto staff in the work of our Association. We hope for his complete and speedy recovery.

It is to be hoped that the temporary absence of Mr. Millar and Mr. Cusack will not retard the forward movement amongst the Sanitary Inspectors of the Province of Ontario, which we feel sure was well started. The other members in Ontario should put their shoulders to the wheel and make up their minds to work a little harder in order to increase the membership. It is extremely important, in view of the fact that our next Convention is to be held in Toronto, that the work should not be allowed to slacken. Every Sanitary Inspector in the Pro-

vince should be approached between now and next Convention, with a view of signing him up as a member. If the names of any prospective members are given to the Secretary, he will undertake to communicate direct with them.

We are glad to hear that Mr. Laurence Robertson of Vancouver is back again from England, where he attended the Congress of the Royal Sanitary Institute. We understand that the Vancouver Inspectors have arranged to take a course of lectures in Theoretical Plumbing given by Mr. Morgan of the University of British Columbia, formerly Chief Plumbing Inspector of Vancouver. Keep your eye on British Columbia.

Saskatchewan Health Officials' Association

Address given by Miss Ruby M. Simpson,
Director of School Hygiene Government of Saskatchewan.

Before the First Annual Convention of the Saskatchewan Health Officials' Association at Saskatoon, Sept. 22nd, 1926.

IT has been interesting to note the prominence given by all previous speakers to education and the part it plays in all Public Health work. The details given of difficulties presented in adult health education tempts me to spend a few moments on an outline of the efforts being made by the Department of Education through its School Hygiene Branch toward health education among school children.

There is, as we all know, no lack of scientific information in the world to-day tending toward health improvement. Unfortunately the greater part of this information is in the hands of the few, and considerable difficulty is experienced in reaching the public with it at a time when it will really have an effect on daily life—that is, at a time when the knowledge given can be crystallized into habit. Psychologists inform us that the habit-forming period of life is in the early years, before school age if possible, and certainly at school age.

The school as a medium for disseminating health information has no equal. Attendance of all the children of all the people is compulsory during the eight most plastic years of life. The machinery for teaching is there and the whole atmosphere is toward the accumulation of knowledge. Public opinion, in the school world, runs high and the group may often be easily influenced when all efforts with the individual would fail. In short, the child goes to school expecting to be taught and we should fail sadly in grasping our opportunity if we neglect to take advantage of this attitude to begin his education in health.

Therefore, health has been made a compulsory subject throughout the entire school life, in this Province—from Grade One in Public Schools to the end of Second Year in High School. Nor is the subject treated as the old time physiology which many of us knew, for information only, but all efforts are toward the development of a really vital subject, the effect of which will readily be discerned in the every day life of the child. In the Junior grades we are concerned only with the actual practice of the simple rules of healthy living, the very obvious rules, so

simple they have been hitherto quite neglected in the education of the child. In the Senior grades we continue to place great emphasis on health practice, but as the need arises sufficient scientific information is given to make the laws of health understandable. Responsibility for personal health is stressed in the primary grades, but later a sense of responsibility for the health of others is developed. This leads easily in High School to information in the subject of responsibility for community health, and, quite naturally, to a discussion of Public Health laws, which we think will mean in future generations a really intelligent respect for such laws, and the elimination of many of the problems in disease control which we have heard discussed here to-day.

In order that teachers in the schools of this Province may know how to teach health in such a manner as to obtain results in actual health practice, health education is taught as a regular subject in the Normal Schools. In charge of a nurse from the School Hygiene Staff, who is also an experienced teacher, instruction is given in every phase of health endeavour as it relates to the school child. Health protection is urged through knowledge of and attention to the maintenance of hygienic conditions in the school and its surroundings. Health improvement through a knowledge of the simple defects noted in children, through prevention and control of communicable disease in schools and simple First Aid, is emphasized and the teacher's responsibility is stressed.

Education in health in which real action follows the information is the basis of the entire course. Not so much what they know but what they actually do is the gauge by which the children are judged.

No effort is spared to interest these young teachers in their own health. Signs of remediable physical defects are pointed out to each student by the nurse and a consultation with a physician is urged if necessary. The Red Cross Society make a splendid contribution to this work, through loans available to students if required for the correction of physical defects. Over $3,000.00 is loaned each year in this work. Due in a large measure to this generous assistance we secure each year over 90% corrections among Normal School students. It is well worth while in terms of reaction in improved child health in our schools. Teachers so trained have definite information as to how to develop and maintain health among their pupils, but, perhaps more important still, they have high personal ideals of health, and their attitude toward health as a school subject makes them enthusiastic in their efforts in the crusade for health action following health information.

In the work of our School nurses throughout the Province we endeavor to supervise in so far as possible the teaching of health in the schools. In every way teachers are encouraged to persevere in the work

as given in the Normal School, and with new material and new inspiration from the visit of the nurse real effort is made toward keeping enthusiasm high. Every year results are improved and we feel that the outlook for the future is bright. If child health education can be made to function, adult education need cause us very little concern.

May I outline, in brief, a few of the advantages which may accrue for the public health nurse from an organization such as the Saskatchewan Health Officials' Association.

1. A clearer understanding of the aims and details of ctivities of other health agencies, resulting in a more complete and more intelligent co-operation.

2. Information as to public health needs from other agencies which would result in the development of new work.

3. The fostering of a friendly spirit among all health officials which would improve the quality as well as increase the pleasure in work together.

4. An information centre for all new knowledge on health subjects. We need all the available knowledge in Tracoma, Tuberculosis, Goitre, etc., given from the viewpoint of prevention.

5. New theories in Sanitation are constantly being advanced. Knowledge regarding them is of great value to the Public Health nurse. Such information should be easily secured here.

6. There may be work in which we can assist other agencies. This Association might be the means of bringing it to our attention.

7. Whole-hearted co-operation will be needed if every pre-school and school child is to benefit by the present campaign for protection from Diphtheria and Smallpox. It is an opportunity for this Association to stand solid behind the endeavor.

8. It would be of inestimable value in school health work if every child could be given a complete physical examination before he enters school. As far as possible this is being done by the Provincial Public Health Department in their Child Welfare Clinics. This Association might devise and sponsor a method by which every child in the Province could be reached.

The Provincial Board of Health of Ontario

Communicable Diseases Reported for the Province by the Local Boards of Health for Weeks Ending Sept. 4, 11, 18, 25, 1926.

COMPARATIVE TABLE

	1926		1925	
Diseases	Cases	Deaths	Cases	Deaths
Cerebro Spinal Meningitis	4	—	4	1
Chancroid	3	—	—	—
Chicken pox	123	—	88	—
Diphtheria	239	18	271	16
Encephalitis	—	—	9	1
Gonorrhœa	133	—	134	—
Influenza	6	—	—	10
German Measles	7	—	1	—
Measles	149	—	59	—
Mumps	15	—	29	—
Pneumonia	—	88	—	85
Poliomyelitis	22	—	37	—
Scarlet Fever	141	—	162	5
Septic Sore Throat	—	—	4	—
Smallpox	23	—	25	—
Syphilis	89	—	79	—
Tuberculosis	117	43	148	62
Typhoid	94	3	130	8
Whooping Cough	232	10	295	7

The following municipalities reported cases of Smallpox:—Sudbury 1, Peel Tp. 1, Lindsay 1, Peterboro 10, Parry Sound 1, Madoc Tp. 2, Sidney Tp. 1, Coldwater 2, Orillia 3, Toronto 1.

Book Review

Announcing a new book on Paediatrics, now in the press. To be issued very shortly by McClelland & Stewart, Limited, 215 Victoria Street, Toronto, Ont.

Common Procedures in the Practice of Paediatrics. By Alan Brown, M.B., Physician-in-Chief to the Hospital for Sick Children, Toronto, and Frederick F. Tisdall, M.D., Attending Physician, Hospital for Sick Children, Toronto, is an important new work for doctors, students of medicine, nurses, etc. It presents in detail the common procedures employed in the medical service of the Hospital for Sick Children.

There are eleven chapters, covering: Method of History Taking; Physical Examination; Infant Feeding; Pre-School and Adolescent Child; Diagnostic and Therapeutic Procedure: Parenteral Administration of Fluids; Eczema—Treatment; The use of Biological Products in the Diagnosis and Treatment of Communicable Diseases; Difficulties in Diagnosis; Laboratory Methods; Drugs.

The methods described are of the greatest practical value to practitioner and student. All apparatus required and the actual steps of the different procedures have been described with great detail to make the work as practical as possible.

Editorial

EDUCATION AND ANTIS

Toronto has recently been treated to an eloquent effusion by another of the itinerant promoters of the cause of the anti-vaccinators. A Miss Lily Loat, who is the Secretary of the National Anti-Vaccination League, of London, England, addressed an audience at length on the evils and ineffectiveness of this procedure. During her address this lady proudly claimed that through the direct efforts of this League there are five million children in Great Britain under sixteen years of age who remain unvaccinated.

Public Health officials are inclined to ignore the activities of such misinformed or uninformed individuals as Miss Loat, but one wonders whether such a course is wise. The axiom that "where ignorance is bliss 'tis folly to be wise" still holds and often direct criticism is futile, but if the statement made by this lady is even nearly correct she has given voice to a statement of tragic import. For children to be left exposed to the possible ravages of a disease as terrible as smallpox may be is a serious matter—a demonstration of the fact that when true prophets are silent people will listen to the prophets who talk loudest and longest, regardless of the soundness of their views.

Canada, like other countries, is cursed by the sporadic prevalence of well-meaning fanatics who preach to a public eager for information as to means for conserving life and happiness. Scientific teaching as to disease prevention is not generally the characteristic of these would-be leaders of the public, and the fact that they sometimes do influence public opinion, or the opinion of a section of the public, is only possible because authentic scientific information is not readily available.

The anti-vaccinator, the anti-vivisector, the exponents of all the weird cults which prevail in our times, as well as the out-and-out quack and charlatan flourish on public credulity and the failure of the scientifically trained to give freely of their store of knowledge to others less informed than they. The lesson is ready to hand for all of us in the public health field. To promote health and reduce mortality there is one formula and one maxim which applies equally to the advancement of all human progress. Educate, educate, educate, or despite all legislation and all scientific advance we are doomed to failure.

ECONOMICS OF HEALTH

In the current number of *Harper's Magazine* there appears an extremely interesting article by Dr. Louis Dublin of the Metropolitan Life

Insurance Company on the Economics of World Health. Every public health official would do well to make himself acquainted with the details as to the economic phases of the problem of health conservation as outlined here, while if legislators generally could only be made to realize the significance of many of the statements made by Dr. Dublin, our legislative assemblies would be more inclined to turn from many of the futile discussions which are only too common to the more serious and essential business of planning for the country's health.

To estimate the value of human life and the cost of illness it is necessary to use the only index most people in these modern times understand—a money index. Dr. Dublin estimates that sickness in the United States costs annually in lost wages, in reduced production as well as in necessary cure, two and a quarter billion dollars per year. Furthermore, the loss to the country through preventable infant mortality estimating as to the capital value of no less than one hundred and twenty thousand babies lost yearly through preventable causes reaches the astounding total of three-quarters of a billion dollars annually. Having regard to the value of the lives lost at all age periods it is estimated that the total capital value of the lives which could be saved annually through the application of modern preventive medicine and public health measures as over six billion dollars, making a total annual expense bill for illness of nearly eight billion dollars. From these figures an estimate may readily be made of the cost of preventable illness in Canada or any other country.

Dr. Dublin points out that while the average expectation of life in the United States has already been increased to between 57 and 58 years this expectation could readily be raised to 65 years if we would utilize our present scientific knowledge, and urges that no greater service could be rendered the general peace and prosperity of the world than this achievement. Dr. Dublin's paper is most illuminating. The PUBLIC HEALTH JOURNAL believes that Dr. Dublin has achieved a distinct service in providing the statistics included in this statement. An evaluation of the actual cost of maintaining life and its productive value gives the business man the opportunity of using his own methods. Even when using his usual index of value he must realize that human life exceeds in value all the material products of a nation, and that if the conservation of other national resources is desirable he should think first of saving the greatest of assets—life and health.